

High Pressure Science at Third-Generation Synchrotron Facilities: State-of-the-art and Future Prospects

3 - 5 February 2014

Programme

Monday, 3rd February – ILL Chadwick Amphitheatre

08:15 – 08:45	<i>Registration in the ILL Main Entrance Hall</i>	
08:45 – 09:00	<i>Welcome by the DoRs</i>	
09:00 – 09:15	Welcome by the organizers	
<i>Session I: Chemistry and Biology – Chairman: G. Aquilanti</i>		
09:15– 10:00	Synthesis and Applications of Consolidated Bodies of Ultrahard Nano-Polycrystalline Diamond	T. Irifune GRC, Ehime, Japan
10:00 – 10:30	CO ₂ -SiO ₂ Compounds obtained at Extreme Conditions	M. Santoro INO-LENS, Firenze, Italy
10:30 – 11:00	<i>Coffee Break</i>	
11:00 – 11:30	High-Pressure Microbiology in the Synchrotron Light	I. Daniel University of Lyon, France
11:30 – 12:00	Triggering Dynamic Structural Changes in Model Lipid Membranes Using Pressure Jump Technology	N. Brooks ICL, London, UK
12:00 – 14:00	<i>Lunch in the common Restaurant on site</i>	
<i>Session II: Frontiers of the field – Chairman: D. Andrault</i>		
14:00 – 14:30	Equations of State of Metals from X-ray Diffraction Data at Static Pressures above 5 Mbar	L. Dubrovinsky University of Bayreuth, Germany
14:30 – 15:00	X-ray Diffraction Experiments at 400 GPa and above: the Example of Aluminium	G. Fiquet IMPMC, Paris, France
15:00 – 15:30	Extreme Conditions Science on 4 th Generation Storage Rings	M. McMahon University of Edinburgh, UK
15:30 – 16:00	<i>Coffee Break</i>	
16:00 – 16:30	Determination of the Phase Diagrams of Hydrogen and Iron: Recent Progress and Future Studies	P. Loubeyre CEA, Bruyères-le-Chatel, France
16:30 – 17:00	TBD	J. Eggert LLNL, Livermore, USA
17:00– 17:30	Investigation of Phase Transitions of Iron under Extreme Dynamic Compression with XANES Measurements at LCLS	M. Harmand Lab. LULI, , Palaiseau, France
17:30 – 18:30	Round table – Phase II	
20:00	<i>Dinner in Town</i>	

Tuesday, 4th February

Users' Meeting – ESRF Auditorium

09:00 – 12:30	ESRF Users' Meeting Plenary Session I – ESRF Auditorium
12:30 – 13:30	<i>Lunch in the common Restaurant on site</i>

High Pressure Science Workshop – ILL Chadwick Amphitheatre

Session III: Hard Condensed Matter - Chair: R. Hermann

13:45 – 14:30	Transition Metal Compounds under Pressure	K. Syassen MPI, Stuttgart, Germany
14:30 – 15:00	Low Temperature and High Pressure Phonon Spectra in the Transition Metal Dichalcogenides	P. Rodière CNRS, Grenoble, France
15:00 – 15:30	The unusual Persistence of the High-Spin State in some Metal-Ferric Oxides to very HP	M. Pasternak SPA, Tel Aviv, Israel
15:30 – 16:00	Room-Temperature Ferromagnetism of Ni at Multimegabar Pressure	I. Sergeev DESY, Hamburg, Germany
16:00 – 16:30	<i>Coffee</i>	
16:30 – 17:00	Dynamic-DAC and Time-resolved Studies of Phase Transition Dynamics	W.J. Evans LLNL, Livermore, CA USA
17:00 – 17:30	Crystal Structures of Carbonates up to Mbar Pressures Determined by Single Crystal Synchrotron Radiation Diffraction	M. Merlini Milano University, Italy
18:00 – 19:30	Cocktail and Joint Poster Session in the marquee	
19:30 – 22:00	<i>Users' Meeting Dinner in the common Restaurant Young Scientist and Best Poster Awards</i>	

Wednesday, 5th February

Users' Meeting – ESRF Auditorium

09:00 – 12:00	ESRF Users' Meeting Plenary Session II	
12:30 – 13:30	<i>Lunch in the common Restaurant on site</i>	

High Pressure Science Workshop – ILL Chadwick Amphitheatre

Session IV: Earth and Planetary Science – Chair: J.P. Perrillat

13:30 – 14:15	A coordinated Approach for Studying Dynamic Processes of Earth and Planetary Interiors using Large-volume Apparatus and Synchrotron Radiation	Y. Wang APS, Chicago, USA
14:15 – 14:45	Probing Melts at High Pressure with X-Ray Absorption Spectroscopy	I. Kantor ESRF, Grenoble, France
14:45 – 15:15	X-ray Spectroscopy on Aqueous Fluids at High Pressure and Temperature	M. Wilke GFZ, Potsdam, Germany
15:15 – 15:30	<i>Coffee Break</i>	
15:30 – 16:00	Experimental Studies of Planetary Cores	G. Morard IMPMC, Paris, France
16:00 – 16:30	Calciocarbonatite Eruption from the Mantle: in Situ Monitoring at High Pressure and High Temperature using Synchrotron Radiation	T. Hammouda LMV, Clermont-Ferrand, France
16:30	Concluding Remarks	